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## PATENT COOPERATION TREATY

## PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY  
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference P2004301M		FOR FURTHER ACTION		See Form PCT/IPEA/416
International application No. PCT/CN2004/000098		International filing date (day/month/year) 05.Feb 2004 (05.02.2004)		Priority date (day/month/year)
International Patent Classification (IPC) or national classification and IPC See the supplemental box				
Applicant WORLDBEST CORPORATION et al				
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>				
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input checked="" type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input checked="" type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>				
Date of submission of the demand 16.Mar.2004(16.03.2004)		Date of completion of this report 27.Mar.2006(27.03.2006)		
Name and mailing address of the IPEA/CN The State Intellectual Property Office, the P.R.China, 6 Xitucheng Rd., Jimen Bridge, Haidian District, Beijing, China 100088		Authorized officer		
Facsimile No. 86-10-62019451		Telephone No. 86-10-62084785		

Form PCT/IPEA/409 (cover sheet) (April 2005)

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/CN2004/000098

## Box No. 1 Basis of the report

1. With regard to the language, this report is based on:

- ☒ the international application in the language in which it was filed
- ☐ a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rules 12.3(a) and 23.1(b))
- ☐ publication of the international application (Rule 12.4(a))
- ☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

- ☒ the international application as originally filed/furnished
- ☐ the description:
- pages \_\_\_\_\_ as originally filed/furnished
- pages \* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages \* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the claims:
- pages \_\_\_\_\_ as originally filed/furnished
- pages \* \_\_\_\_\_ as amended (together with any statement) under Article 19
- pages \* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages \* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ the drawings:
- pages \_\_\_\_\_ as originally filed/furnished
- pages \* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- pages \* \_\_\_\_\_ received by this Authority on \_\_\_\_\_
- ☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/figs \_\_\_\_\_
- ☐ the sequence listing (*specify*): \_\_\_\_\_
- ☐ any table(s) related to sequence listing (*specify*): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/CN2004/000098

## Box No. IV Lack of unity of invention

1. ☐ In response to the invitation to restrict or pay additional fees the applicant has, within the applicable time limit:
- ☐ restricted the claims
  - ☐ paid additional fees
  - ☐ paid additional fees under protest and, where applicable, the protest fee
  - ☐ paid additional fees under protest but the applicable protest fee was not paid
  - ☐ neither restricted nor paid additional fees
2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is

- ☐ complied with.
- ☒ not complied with for the following reasons:

A heating apparatus is disclosed in D1 (US4551617A). The apparatus includes a number of infrared lamps 7 in the glass ceramic layer 20, which are equivalent to the radiation layer of the present invention. Therefore, the subject matters of claim 1 and claims 10, 18 do not contain any same or corresponding special technical features. Consequently, unity does not exist between claim 1 and claims 10, 18.

4. Consequently, this report has been established in respect of the following parts of the international application:

- ☒ all parts.
- ☐ the parts relating to claims Nos. \_\_\_\_\_

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.  
PCT/CN2004/000098**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement:**

Novelty (N)	Claims 2-21	YES
	Claims 1	NO
Inventive step (IS)	Claims 2-6,10-17	YES
	Claims 7-9, 18-21	NO
Industrial applicability (IA)	Claims 1-21	YES
	Claims	NO

**2. Citations and explanations (Rule 70.7)**

The following documents (D) are referred to in this report:

D1:US4551617A; D2: US4563572A; D3: US5628859A

**Novelty:**

a heating apparatus is disclosed in D1 (see column 2, line 4, to column 3 line 15, figures 2). The apparatus includes a glass ceramic layer 20 to serve as a cooking hob, a number of infrared lamps 7 in the glass ceramic layer 20, and a layer 2 of insulative material facing the glass ceramic layer 20. From above, we can see that all the features of claim 1 are disclosed in D1. Therefore claim 1 does not meet the requirement of Art.33(2) PCT.

All the features of claims 2-21 are not disclosed in D1, neither in other documents cited in this search report, therefore claims 2-21 are novel and meet the requirement of Art.33(2) PCT.

**Inventive step:****1. claim 7,8,9**

Based on the information disclosed in D1 and the common knowledge in this field, those skilled in the art would naturally figure out the technical solutions of claim 7,8, if necessary. Besides, we can see from figure 2 in D1 that infrared lamps 7 are positioned between the glass ceramic layer 20 and layer 2. Thus the additional features of claim 9 are disclosed in D1. So claims 7,8 and 9 can not be accepted to involve an inventive step and do not meet the requirement of Art.33(3) PCT.

**2. claim 18**

D2 discloses a radiant electrical heater (see column 2, line 46, to column 5 line 7, figures 1). Said heater comprises a ribbon heater 4 which is equivalent to the radiation member as well as the energy source of the present invention, a parabolic cross section reflector 2 with its concave surface facing the ribbon heater 4 for distributing energy to a selected area between point a' and point b'. The distinctive features between claim 18 and D2 lie in: (a) the reflection member in claim 18 is at least partially of ring shape; and (b) the energy is distributed to an at least partially ring-shaped area, wherein feature (b) is the certain result of the structural feature (a). From above, we can see that D2 and claim 18 share the same technical principle, what's more for a person skilled in the art, when facing the technical problem that a selected area, especially a ring-shaped area which is similar to the parabolic shape, is to be heated, it's natural to alter the shape of the reflector into the shape of a ring. Therefore, it would be obvious for a person skilled in the art to acquire the technical solution of claim 18. Consequently claim 18 does not meet the requirement of Art.33(3) PCT regarding the inventive step.

**3. claims 19, 20**

In order to heat an area with a specific shape, it is natural for a person skilled in the art to adopt a radiation element with a corresponding shape. The additional features of dependent claim 20 are disclosed in D2. Thus it is easy to work out the solutions of claims 19,20 for a person skilled in the art. As a result, claims 19 and 20 can not be accepted to involve an inventive step and do not meet the requirement of Art.33(3) PCT.

**4. claim 21**

The additional features of dependent claim 21 are disclosed in D3 (see column 4, line 51 to line 62, Figure 8) and based on this, it is easy for a person skilled in the art to figure out the solution of claim 21. Therefore claim 21 can not be accepted to involve an inventive step and doesn't meet the requirement of Art.33(3) PCT.

**Industrial applicability:**

Claims 1 to 21 have industrial applicability under PCT Article 33(4), because the radiator claimed can be made or used in the industry.

**Box No. VII Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

The meaning of the phrase "provides a force" is not clear, so claim 15 does not comply with Rule 6 of PCT.